A NEW SUBSPECIES OF ORCHOPEAS SEXDENTATUS (BAKER)

(SIPHONAPTERA: DOLICHOPSYLLIDAE)

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During a recent field trip into the Grand Canyon National Park by Dr. John S. Garth, Dr. R. L. Rutherford, and Granville P. Ashcraft for the Allan Hancock Foundation, a fine series of ectoparasites were collected. Among this material are two fleas apparently new to science which are here described and illustrated.

The writer is grateful to Dr. H. C. Bryant, Superintendent, Grand Canyon National Park, for his invitation to the Allan Hancock Foundation thereby making possible the receipt of the above mentioned material, and to Ranger Naturalist Louis Shellback, likewise of the Grand Canyon National Park, for the addition of specimens from the Naturalist Work Shop, Grand Canyon National Park.

Host identification is that of J. C. von Bloeker, Mammalogist, Allan Hancock Foundation, from specimens put up in the field by G. P. Ashcraft.

FAMILY DOLICHOPSYLLIDAE

Orchopeas sexdentatus neotomae n. subsp.

Holotype Female

Head: frontal notch present, small, sharply acuminate; labial palpi slightly shorter than fore-coxa; maxillae sharply acuminate; preantennal region with two rows of bristles, three usual large bristles in lower row, five in upper, of medium size to somewhat smaller along antennal groove (bristle on immediate margin of gena broken in type): eye conspicuous, darkly pigmented; genal process sharp, somewhat darkly pigmented; post-antennal region with three bristles just beyond middle of posterior antennal groove, two medium bristles above a much larger single bristle.

Thorax, abdomen, and legs: pronotum with nine lone, slender spines on a side; tergum of metanotum with two tergal teeth, first abdominal tergite with two, second with four, third with four; three antepygidial bristles, the middle one-third longer than the outer and one-half longer than the inner; style short, its

length not exceeding much more than twice its greatest width, a long terminal bristle with minute dorso-lateral and medium ventro-lateral bristles; sternite VII very diagnostic, a sharp, deep sinus between a broad, blunt upper lobe and a shorter, narrower lower lobe; legs as in other members of the genus.

Allotype Male

Head: as in female, the upper row of bristles in the preantennal region along the anterior antennal groove more conspicuous and larger than in female; bristles in postantennal region all sub-equal.

Thorax, abdomen, and legs: pronotum as in female; tergal teeth as in female, with addition of two on fourth abdominal tergite; two antepygidial bristles, the inner twice the length of the outer; moveable finger very diagnostic, close to *O. s. schisintus* (Jordan) but upper free portion very uniform in width on the very long fixed end, four very short spiniforms, the two lower ones close together; sternite IX also characteristic, lower lobe smaller, more angulate than in *O.s. schisintus,* upper lobe rounded dorsally, concave distad; sternite VIII reduced as in other members of the genus; legs as in other members of the genus.

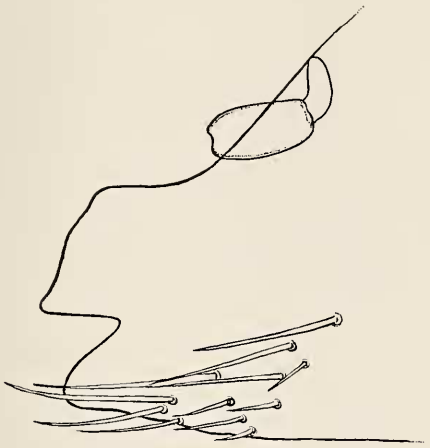
Holotype: a ♀ from *Neotoma lepida devia* Goldman, collected by R. L. Rutherford, South Entrance Grand Canyon National Park, Coconino Co., Arizona, June 5, 1942. Deposited in the Allan Hancock Foundation, University of Southern California, Los Angeles, California.

Allotype: a ♂ collected and deposited with the holotype as above.

Type Host: *Neotoma lepida devia* Goldman.

Type Locality: South Entrance Grand Canyon National Park, Coconino county, Arizona.

Remarks: this new subspecies, as already referred to, is close to *O.s. schisintus* (Jordan). Jordan (1929) in his analysis of new subspecies of *O. sexdentatus* stresses the importance of the length of the terminal segment of the labial palpi as being shorter than the next two above together as a diagnostic feature with this category, but so may *O. wickhami* (Baker)! However, *O.s. neotomae* is readily separated from others of the group by the modified abdominal segments. *O.s. neotomae* is named from the host animal to which it is probably a normal parasite. Illustrations were drawn, under the writer's supervision, by Mr. Anker Peterson, Staff Artist, Allan Hancock Foundation.



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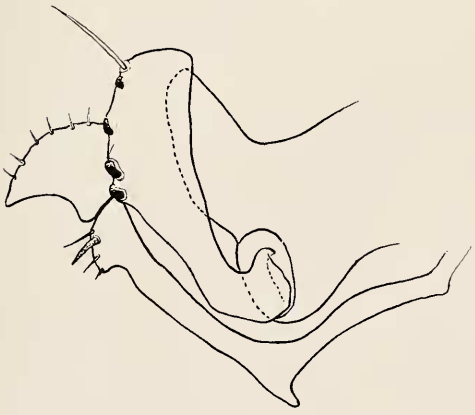

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PLATE 5

Fig. 1. *Orchopeas s. neotomae* Augustson, sternite VII, spermatheca, holotype female.

Fig. 2. *Orchopeas s. neotomae* Augustson, clasper, moveable finger, sternite IX, allotype male.